I claim:

1. A method for adjusting the output light properties of a doped optical fiber comprising the steps of:

   passing a light ray through the fiber;

   monitoring the desired property of the light ray exiting the fiber;

   exposing the multi-mode fiber to means to adjust the refractive properties of the fiber;

   stopping refractive change means as soon as desired output light properties are achieved.

2. The method of claim 1 wherein the fiber is a doped fiber and the means to adjust refractive index is exposure to laser radiation.

3. A optical fiber collimating coupler comprising:

   a single-mode optical fiber;

   a length of graded-index multi-mode optical fiber attached to said single-mode fiber;

   wherein the refractive index of the graded-index multi-mode fiber has been exposed to means to change the refractive properties of the multi-mode fiber.

4. Optical fiber collimating coupler according to claim 1 in which the means to change the refractive properties of the multi-mode fiber comprises an ultra-violet laser.

5. Method of termination of optical fibers comprising the steps of:

removal of protective jacket, ensuring that the underlying cladding is clean;

cleaving a single-mode optical fiber;

cutting a length of graded-index multi-mode optical fiber to a length L which approximates B(n + 0.5) wherein B is the beat length of the light ray expected to pass through the multi-mode fiber, and n is any integer;

fusing the multi-mode fiber to the single-mode fiber;

passing a light ray through the single-mode fiber;

monitoring the collimation of the light ray exiting the multi-mode fiber;

exposing the multi-mode fiber to means to adjust the refractive properties of the multi-mode fiber;

stopping refractive change means as soon as optimal beam collimation is achieved.

6. Method of coupling an optical fiber to a component of unequal numerical aperture comprising the steps of:

removal of protective jacket of the fiber, ensuring that the underlying cladding is clean;

cutting a length of graded-index multi-mode optical fiber to a length L which approximates B(n + 0.5) wherein B is the beat length of the light ray expected to pass through the multi-mode fiber, and n is any integer;

fusing the multi-mode fiber to the single-mode fiber;

passing a light ray through the single-mode fiber;

placing the component to be coupled and the fiber assembly in the desired configuration;

monitoring the collimation of the light ray exiting the multi-mode fiber;

exposing the multi-mode fiber to means to adjust the refractive properties of the multi-mode fiber;

stopping refractive change means as soon as optimal coupling conditions are achieved .